SONY

3-751-795-11 (1)

Cordless Stereo Headphones

MDR-IF510K

Operating Instructions Page 2

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Mode d'emploi Page 12

Avant de faire fonctionner cet appareil, prière de lire attentivement ce mode d'emploi et de le conserver à titre de référence ultérieure.

Manual de instrucciones Página 22

Antes de utilizar la unidad, lea detenidamente este manual y consérvelo para futuras referencias.

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WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Precautions

- Unplug the AC power cord from the wall outlet when it is not to be used for an extended period of time. To disconnect the cord, pull it out by grasping the plug. Never pull it by the cord.
- Do not open the cabinet. Refer servicing to qualified personnel only.
- Do not install the unit in a location near heat sources such as radiator or airducts, or in a place subject to direct sunlight, excessive dust, mechanical vibration, or shock.
- Should any solid object or liquid fall into the unit, unplug the unit and have it checked by qualified personnel before operating it any further.
- The unit is not disconnected from the AC power source (mains) as long as it is connect to the wall outlet, even if the unit itself has been turned off.
- The nameplate indicating operating voltage, power consumption, etc. is located on the bottom exterior.
- Do not use alcohol, benzine or thinner to clean the cabinet.

Precautions on batteries

Careless handling can cause leakage or the destruction of the batteries.

- Install + and – correctly.
- Do not mix new and used batteries, or different types of batteries.
- When the unit will not be used for a long period of time, take the batteries out of the unit.
- When a battery leaks, be sure to wipe off the battery compartment very carefully before putting in new batteries.

If you have any question or problem concerning your unit that is not covered in this manual, please consult the nearest Sony dealer.

Be sure to bring the headphones and the transmitter (modulator and emitter) to the Sony dealer when requesting repair.

Overview

The MDR-IF510K is a cordless stereo headphone system which uses infrared rays. This system allows you to listen to a program free from the restriction of a headphone cord.

Features

- Infrared-ray system is not affected by radio noise.
- The modulator can be used with any audio/video equipment with a headphone jack or line/recording out jacks.
- The headphones are compact and lightweight, and provide high quality sound.
- The headphones accept optional rechargeable batteries in addition to size AA (R6) batteries.
- You can expand the effective area of infrared ray by using additional emitters (IFP-10 emitter and/or another TMR-IF10K transmitter, not supplied, are necessary).

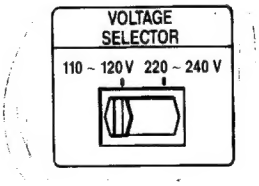
Note

If you use the headphones at too great a distance from the emitter, you may hear a hissing sound and if there is an object between the headphones and the transmitter, the sound may be interrupted. These phenomena are inherent to infrared-ray communication and do not mean there is a problem with the unit itself.

Adjusting Operating Voltage

For the customers of the model equipped with the voltage selector

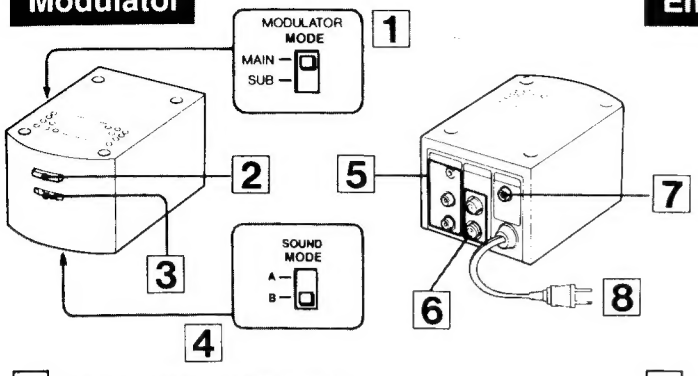
Check that the voltage selector is set to the local power line voltage. If not, set the selector to the correct position before connecting the AC power cord to a wall outlet.



Parts Identification

The transmitter consists of two components, the modulator and the emitter.
You can place the emitter on the modulator for your convenience.

Modulator



1 MODULATOR MODE switch
Set the switch according to the table below. **If it is not set properly, no sound will be output.**

Without an additional modulator (normal operation)	Set the switch to MAIN
With an additional modulator	Set the switch on the modulator connected to audio/video equipment to MAIN, and the switch on the other modulator to SUB.

2 POWER switch
Press to turn on the modulator and the emitter. When they are turned on, the switch glows green. To turn off, press it again.

3 INPUT SELECT switch
Selects the equipment connected to AUDIO IN A or B jacks.

4 SOUND MODE switch
Set to A or B in accordance with the type of your headphones.
Always set to B when you use the supplied headphones, MDR-IF510.

5 AUDIO IN jacks
A-phono jacks B-stereo mini jack

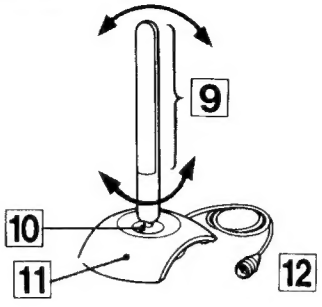
6 TO EMITTER 1 and 2 connectors
Connect the emitter cord. Two emitters can be connected to the modulator.

Caution

Do not connect anything other than the emitter. Because DC current is output, you may impair the connected equipment.

7 TO ADDITIONAL MODULATOR jack
If you use an additional modulator, connect it to this jack with a video cable. When using the additional modulator, be sure to set MODULATOR MODE switch properly.

Emitter



8 AC power cord
Connect to a wall outlet.

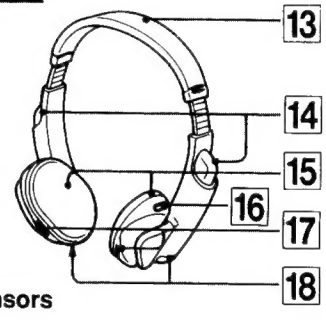
9 Emitter head
Emits infrared ray. You can adjust angle and direction.

10 Base

11 Base cover

12 Connection cord
Connect to the TO EMITTER connector on the modulator.

Headphones



13 Head band

14 Infrared sensors

15 Ear pads

16 POWER switch and indicator
Press the switch to turn on the power of headphones. When power is turned on, the red indicator glows. To turn off, press it again. When the headphones are kept turned on for more than three hours, they are turned off automatically to prevent battery drain.

17 VOL (volume) controls
Adjust the level of each channel.

18 Battery compartment cover.

Connection

Notes on Connection

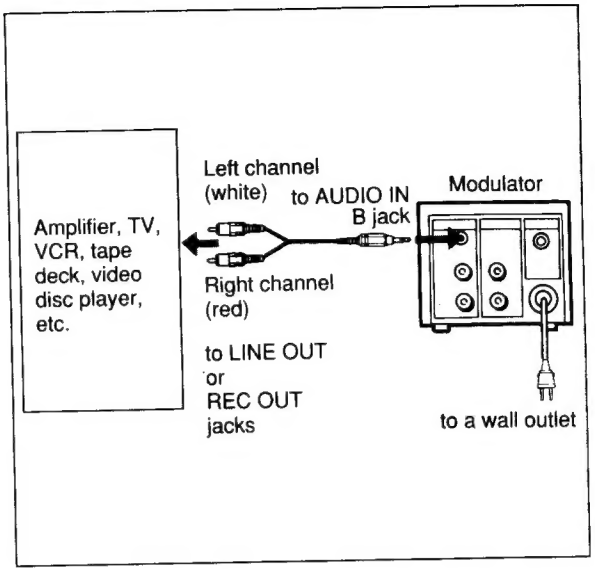
You can connect two pieces of audio/video equipment to the modulator.
When you connect the modulator by using the supplied connection cord, connect AUDIO IN A jacks to the HEADPHONE jack, and connect AUDIO IN B jack to LINE OUT/REC OUT jacks.
You can select either of connected equipment by using INPUT SELECT switch.

Optional connection cords
To connect the AUDIO IN A jack to the LINE OUT/ REC OUT jacks
RK-C510KS (1 m)/C515KS (1.5 m)/C520KS (2 m) (phono plug × 2 ↔ phono plug × 2)

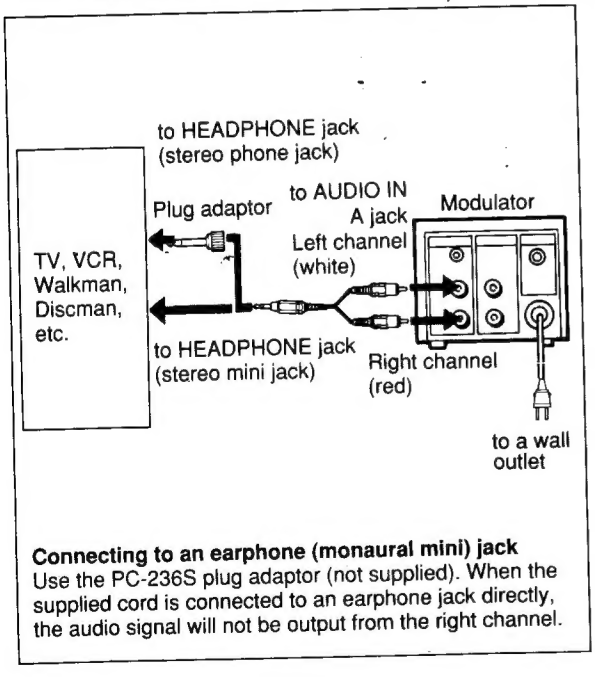
To connect the AUDIO IN B jack to the HEADPHONE jack
RK-G136KS (stereo mini plug ↔ stereo mini plug)

Cord having the same function as the supplied one
RK-G129KS (stereo mini plug ↔ phono plug × 2)

Connecting to the LINE OUT/REC OUT Jacks

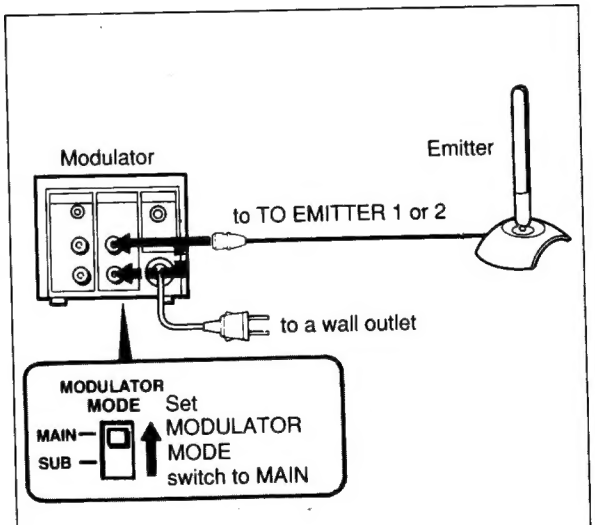


Connecting to the HEADPHONE Jack



Connecting to an earphone (monaural mini) jack
Use the PC-236S plug adaptor (not supplied). When the supplied cord is connected to an earphone jack directly, the audio signal will not be output from the right channel.

Connecting the Emitter



To extend the connection cord
Use the EAC-630 (3 m) 75-ohm coaxial cable (not supplied).

Positioning the Emitter

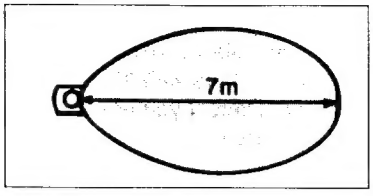
On the Effective Area of Infrared Ray

The diagram below illustrates the approximate effective area of the infrared ray emitted from the emitter. Position the emitter so that your listening area is within the effective range.

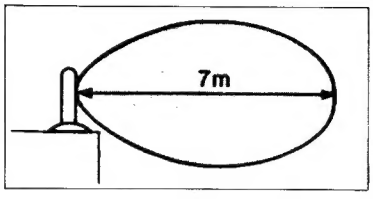
Caution

- The infrared ray will not penetrate walls or opaque glass, therefore the headphones must be used in the "in sight" area of the transmitter.
- If you want to use the headphones in wider area, refer to instructions in "To Expand the Effective Area of Infrared Ray."

Top view



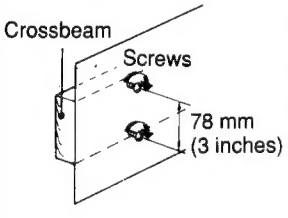
Side view



Hanging the Emitter on the Wall

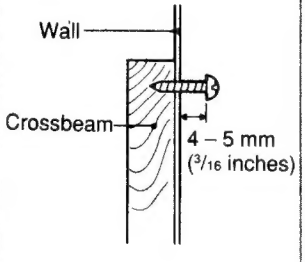
If you want to hang the emitter on the wall, follow these steps.

1 **Bore two holes into the wall to mount the emitter. The holes should be about 78 mm (3 inches) apart.**

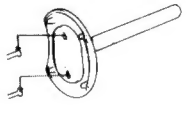


Before installing the emitter, please check whether or not the material of the wall is strong enough to hold the emitter. It is necessary to reinforce plaster boards, particle boards and other soft material boards.

2 **Screw in the supplied screws until they protrude about 4 – 5 mm (3/16 inches).**



3 **Fit the mounting holes of the emitter over the screws and lower the emitter a little so that the screws are lodged in the mounting holes.**



4 **After positioning the emitter, adjust its direction and angle to obtain the optimum sound quality.**

Note

Sony disclaims any responsibiliy for injury to persons or other accidents caused by not fitting the emitter properly or when the place of the installation is not suitable.

To Expand the Effective Area of Infrared Ray

Using Additional Emitters

If you want to use the headphones in wider area than that shown above, use additional emitter(s). You can use two emitters with the supplied modulator, and up to four emitters if you use the transmitter TMR-IF10K (not supplied).

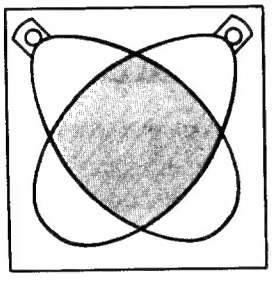
Optional accessories

Number of emitters	Accessories required
2	Emitter IFP-10
3	Transmitter TMR-IF10K* Emitter IFP-10
4	Transmitter TMR-IF10K* Emitter IFP-10 × 2

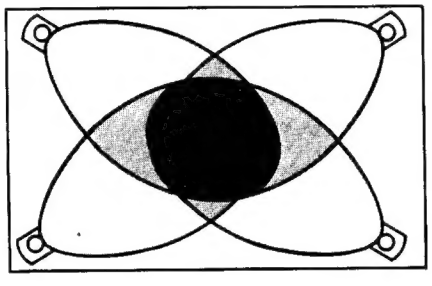
* The TMR-IF10K transmitter consists of the TMR-IF10 modulator and the IFP-10 emitter.

Emitter Positioning Examples

Two-emitter system



Four-emitter system

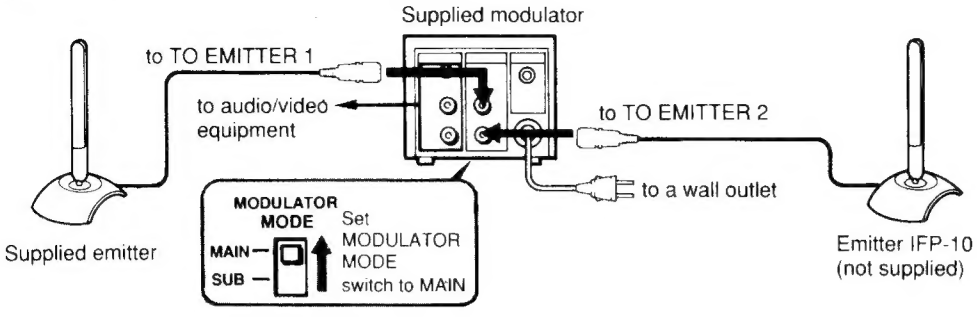


Note

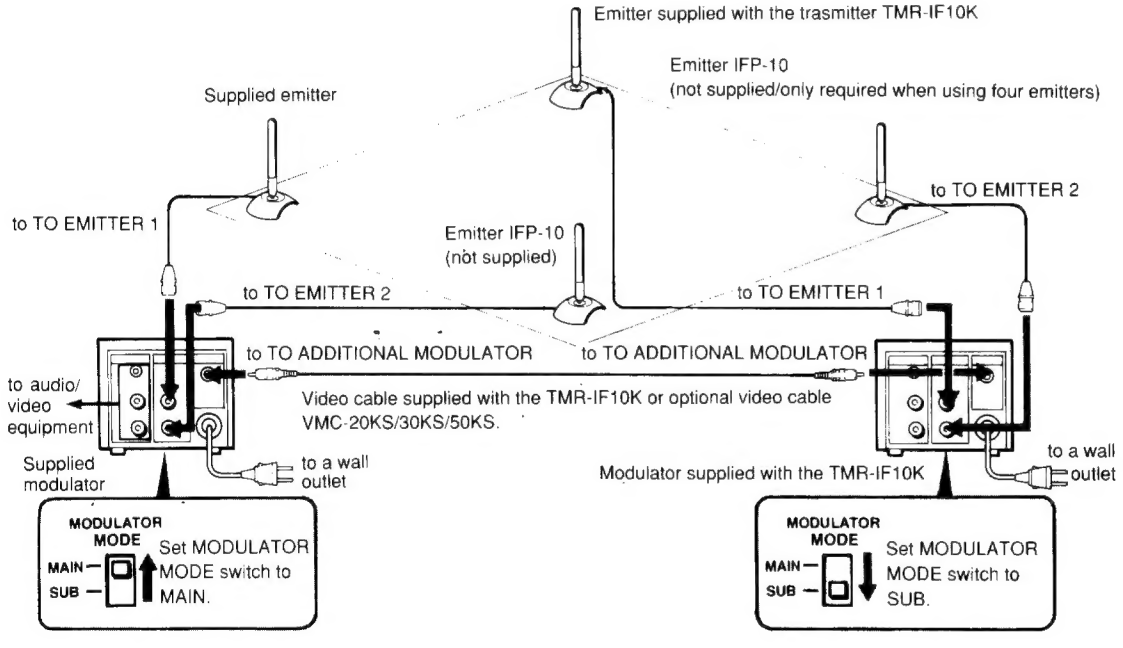
To obtain optimum stability of reception, position the emitters so that their infrared rays overlap at the area you mainly use the headphones.

Connecting Additional Emitters

When using two emitters



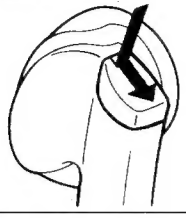
When using three or four emitters



Installing Batteries

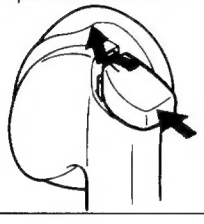
Installation

1 Open the battery compartment cover.



2 Insert a battery as shown on the cover.

3 Close the battery compartment cover.



Usable Batteries

The headphones can be powered by two AA (R6) size batteries or the NC-6WM/NC-5WM rechargeable batteries (not supplied). Always use the same type of batteries for right and left battery compartments. When you use the rechargeable batteries, use the dedicated battery charger BC-7L. Refer to the operating instructions which come with the charger for charging operation.

When the batteries get weak

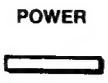
The POWER indicator dims, and hissing sound increases. In this case, replace (or charge) both batteries.

The approximate battery life for continuous operation is as follows:

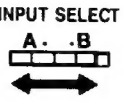
Sony alkaline battery AM-3:	90 hours
Sony battery SUM-3NS:	45 hours
Rechargeable battery NC-6WM:	25 hours
Rechargeable battery NC-5WM:	20 hours

Listening to a Program

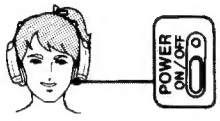
1 Turn on the power switch of the modulator(s).



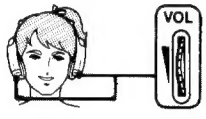
2 Select the connected equipment with INPUT SELECT switch.



3 Turn on the power switch of the headphones and put them on.
Adjust the head band if necessary.



4 Start playback of the connected equipment, and adjust the volume control of the headphones so that the audio level of both channels becomes equal.
If the modulator is connected to the HEADPHONE jack, set the volume control of the equipment as high as possible but not so high that the audio signal is distorted.



After using the headphones
Turn off the power of the modulator and the headphones.

When the headphones are kept on for more than three hours
They are turned off automatically to prevent battery drain. To continue using the headphones, press POWER to turn on again.

Note

- Be sure to remain in the effective area of the infrared ray while listening.
- Do not cover the infrared sensors with your hands or hair.
- Do not use headphones under the direct sunlight.

Specifications

General

Infrared wavelength:	850 nm
Modulation:	Frequency modulation
Carrier frequency:	Right 2.8 MHz Left 2.3 MHz
Effective range:	Up to 7 m (23 ft)
Frequency response:	18 – 22,000 Hz
Distortion:	Less than 1% at 1 kHz

Modulator TMR-IF10

Power source:	European model: 220 V AC, 50 Hz Models for other countries: 110 – 120 V or 220 – 240 V AC adjustable, 50/60 Hz
Audio input:	A (phono jack), B (stereo mini jack)
Emitter output:	F connector × 2
Dimensions: (W × H × D)	90 × 73 × 140 mm ($3^5/_8 \times 2^7/_8 \times 5^5/_8$ in)
Weight:	Approx. 740 g (26.1 oz.)

Emitter IFP-10

Connection cord:	Coaxial cable with F conne length: approx. 2 m
Dimensions: (W × H × D)	90 × 230 × 140 mm ($3^5/_8 \times 9^1/_8 \times 5^5/_8$)
Weight:	Approx. 160 g (5.6 oz.)

Headphones MDR-IF510

Power source:	DC 3V; two size AA(R6) batteries or two rechargeal batteries, NC-6WM or NC-5WM (not supplied)
Weight:	Approx. 180 g (6.3 oz.) including size AA(R6) batte

Supplied accessories

Connection cord (stereo mini plug ↔ stereo phono plug
Plug adaptor (stereo mini jack ↔ stereo phone plug) (1)
Screws (2)

Design and specifications subject to change without not

Troubleshooting Guide

SYMPTOM	CAUSE	REMEDY
No sound	Headphones batteries are exhausted.	Replace the batteries or charge the rechargeable batteries.
	Modulator is not turned on.	Turn on the modulator.
	The connected audio/video equipment is not turned on.	Turn on the equipment.
	Output volume of the connected equipment is completely turned down.	Adjust the volume to the appropriate level.
	Headphone volume is completely turned down.	Adjust the volume to appropriate level.
	MODULATOR MODE switch is not set properly.	Set it properly (refer to "Parts Identification").
Distortion	Headphones batteries are weak.	Replace the batteries or charge the rechargeable batteries.
	Input level of the audio signal is too high.	If the modulator is connected to the HEADPHONE jack, turn down the volume of the connected equipment.
Loud hissing noise	Headphones batteries are weak.	Replace the batteries or charge the rechargeable batteries.
	Poor reception of infrared rays.	Use the headphones closer to the emitter.
		Check if there is an object between emitter and headphones.
		Check if the infrared sensors are covered with your hands or hair.
		Change the position or angle of the emitter.
	Input level of the audio signal is too low.	If the modulator is connected to the HEADPHONE jack, turn up the volume of the connected equipment.
	SOUND MODE switch is set to "A".	Set it to "B".